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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,268	08/30/2000	Frank Filser	00-497	1826

7590 01/10/2005

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EXAMINER


HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/623,268	Applicant(s) FILSER ET AL. 	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28-31 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28: Examiner does not understand the formula. Namely, the last part. Examiner has never seen anything like it. There is no explanation or examples of this in the specification. It is deemed that since examiner cannot figure it out, it is likely that one of ordinary skill would not understand what it means.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlwend 6106747.

The invention is disclosed at col 3, lines 24-42 and col. 4, lines 51-54. Feature 10 is the blank – which would inherently have both densities. As to the digitizing – it

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would have been obvious to digitize it – at least into binary digits – because that is how most computers store data. As to the enlargement factor – it is inherent that it was determined some how – by calculating, guessing, ouiji board, or some other way.

As to f being “in accordance” – such is not given much weight. First, since Wohlwend gets the same results as applicant, Wohlwend would inherently have the same factor. Second – the densities are “relative” and there is no indication as to what they are relative to. One could say that each density is relative to each other density by the factor of either f^3 or f^{-3} . Where f is Wohlwend's enlargement factor. Furthermore – as per the letters from various experts: the enlargement factor is routinely used – it is “standard”.

It would have been obvious to apply the factor in all directions – because the body would shrink in all directions.

As to the data transferring step: see the transmitting of col 3, line 40. The rest of the limitations are clearly met.

Claim 17: the claim does not indicate how fine the margins must be. It is clear they are fine enough for the Wohlwend purpose. Alternatively, it would have been obvious to make the margins as fine as desired and achievable.

Claims 18-20: It would have been obvious to sinter to the final degree desired – i.e. 100% of the theoretical designed density – it is inherent that it is possible.

Claim 21: see claim 3 of the reference.

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Claim 22: it is a well known machine practice to have a rough machining step to quickly remove most of the unwanted material, followed by a fine machining so as to fine-tune the surfaces.

Claims 23-24: it would have been obvious to heat treat the blank where needed for the particular ceramic material used. For example, if the blanks is damp, one would want to dry it out, so that the water inside doesn't form explosive steam which ruptures the blank.

Claim 25-26, would have been obvious because it is well known that things can expand when wet. One would want the blank to be at the known density –and not at unknown density due to water content.

Claims 27-28: see col. 5, lines 15-25. It alumina or zirconium oxide presinters at 1080C.

Claim 29: as best understood the claim would have been met because such are typical binders to allow green bodies to have some strength before sintering. See col. 4, lines 18-20 for example.

Claims 30-31: it would have been obvious to perform routine experimentation to determine the optimal amount of binder that is needed.

Claim 32: in addition to the way claim 16 is treated (above): claim 32 requires moving the tool along a devised path. This is not disclosed. It would have been obvious to have machining already programmed (i.e. devised) because doing it randomly probably would not work, and doing it by hand would not be cost effective. It

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is deemed that moving the tool would be essentially the same as moving the blank into the tool – with no new or unexpected results.

Claim 33 has an additional step of sintering a further piece. It would have been obvious to repeat the Wohlwend process as many times as needed for as many teeth as desired. The claim does not specify when the further piece is sintered. The additional skeletal structures would be further pieces that are sintered.

Claim 34: as best understood the claim would have been met because such are typical binders to allow green bodies to have some strength before sintering. See col. 4, lines 18-20 for example.

Response to Arguments

Applicant's arguments filed 1 December 2004 have been fully considered but they are not persuasive.

It is argued that the present invention includes calculating an enlargement factor. Examiner could find no support for any such calculating; the claims only require "determining." This limitation is met as discussed in the rejection.

It is further argued that the Wohlwend enlargement is primitive and not specific to the same degree as now claimed. Examiner could find no limitation in the present claims which define over a primitive enlargement factor. The claims encompass any sort of enlargement factor. Applicant's invention might have "very precise" features, but the claims are not limited to any degree of precision. Also, Applicant has not clearly and

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distinctly pointed out any specific claim limitation that would exclude Wohlwend's relatively primitive method.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

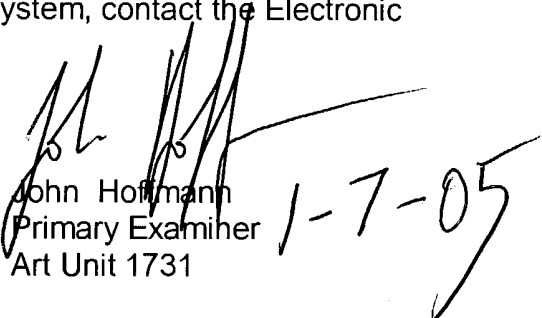
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

jmh